

Validity, Reliability, and Incremental Prediction of Nightmares Using a Shortened Form of the Nightmare Proneness Scale (NPS-6)

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ABSTRACT – Previous research proposed a shortened 6-item version of the Nightmare Proneness Scale (NPS-6) to assess nightmare proneness, a trait-like disposition toward frequent nightmares. Comprehensive psychometric evaluation, however, remained limited. Three studies ($N = 543$ adults) examined the factorial structure, validity, and temporal stability of the NPS-6. Results supported a unidimensional structure and adequate internal consistency. The NPS-6 demonstrated substantial yet partially distinct associations with hypothesized core processes (emotional dysregulation, vulnerability, concretization) as well as neuroticism and nightmare frequency. Discriminant validity was evidenced by negligible correlations with social desirability and sleep length. The NPS-6 predicted nightmares beyond sociodemographic and related affective variables, supporting incremental validity. One-month retest reliability was .902. Findings suggest the NPS-6 provides a reliable, temporally stable, and distinct measure of nightmare proneness suitable for efficient assessment in individual differences research.

Keywords:

Nightmare proneness; Nightmares;
Emotional dysregulation;
Vulnerability; Concretization;
Neuroticism

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Introduction

The Nightmare Proneness Scale (NPS; Kelly, 2018) was developed to assess nightmare proneness – a trait-like tendency to experience frequent nightmares. Nightmares, defined as disturbing dreams that awaken the sleeper (Hartmann, 1999), are experienced “sometimes” by approximately 40% and “often” by 4–11% of adults (Bolstad et al., 2026; Sandman et al., 2013). Across multiple university student samples, the NPS has demonstrated moderate associations with retrospective measures of nightmare frequency ($r_s = .25-.51$, $M = .36$; Kelly,

2018, 2022, 2023, 2024a; Kelly & Daughtry, 2022; Kelly, Daughtry, et al., 2024; Kelly & Mathe, 2019, 2024; Kelly & Yu, 2019). In one study, 71% of individuals reporting weekly nightmares were classified as scoring high on the NPS (Kelly, 2024a). Collectively, these findings support the NPS as a measure of susceptibility to nightmares rather than a direct index of nightmare frequency.

Beyond frequency, nightmare proneness has been associated with lower physical activity (Arbinaga et al., 2019), evening chronotype (Toscano-Hermoso et al., 2020), physiological hyperarousal (Kelly, 2024b), poorer reported mental and physical health (Kelly, 2023a), “thin” psychological boundaries, and sensory processing sensitivity (Kelly & Mathe, 2025). However, although these findings provide contextual correlates, they do not fully clarify the latent structure of nightmare proneness or its distinction from broader distress-related traits.

At the item level, several NPS indicators resemble content found in measures of neuroticism or maladjustment. Indeed, the scale was initially conceptualized as assessing maladjustment markers relevant to nightmares (Kelly, 2018). Nevertheless, across studies the NPS predicts nightmares independent of neuroticism and distress (Kelly, 2018; Kelly & Daughtry, 2022; Kelly & Mathe, 2019; Kelly & Yu, 2019; Kelly, Zamora, et al., 2024), prompting a reconceptualization based on item content and theoretical grounding (Kelly, 2023a; Kelly & Daughtry, 2022; Kelly, Daughtry, et al., 2024; Kelly & Mathe, 2019; Kelly & Yu, 2019). This reconceptualization integrates processes proposed in nightmare and personality theory (e.g., Hartmann, 1984; Kohut, 1977; Levin & Nielsen, 2009).

The nightmare proneness model (Kelly, 2025a; Kelly & Daughtry, 2022; Kelly, Daughtry, et al., 2024; Kelly & Mathe, 2019) proposes that unhealthy attachment experiences and temperament, particularly avoidance-related dispositions, foster an unintegrated psychic structure characterized by diffuse psychical hyperarousal and perceived helpless vulnerability. These relatively nebulous internal states are hypothesized to undergo concretization, a process through which vague affective or cognitive distress is transformed into vivid sensory imagery during dreaming (Kelly, 2024c; Kelly, Daughtry, et al., 2024; Kohut, 1977). Nightmare proneness thus reflects a cognitive-emotional processing style that predisposes individuals to experience nightmares.

Empirical support for the model remains emerging. Research indicates that psychical dysregulation is a core component of the NPS (Kelly & Mathe, 2019), and that dysregulation and vulnerability influence nightmares indirectly through nightmare proneness (Kelly & Daughtry, 2022). Further, concretization has been shown to mediate associations between nightmare proneness and nightmares (Kelly, Daughtry, et al., 2024). These findings suggest that nightmare proneness is not reducible to general distress but reflects a structured constellation of processes that uniquely predispose individuals to nightmare production.

The original NPS contains 14 items, which is relatively brief. However, recent work identified six items that loaded most strongly on a general dysregulation factor and captured the core variance of the construct (Kelly, 2025b; Kelly & Mathe, 2019). Preliminary findings suggested that this abbreviated form (NPS-6) demonstrated good internal consistency, a unidimensional structure, and strong correspondence with the full scale (Kelly, 2025b). Importantly, abbreviation may offer more than administrative efficiency. By focusing on the strongest indicators of the latent construct, the NPS-6 may reduce potential state contamination (e.g., transient depressive or stress reactions), sharpen measurement of the trait core, and enhance temporal stability. If so, the NPS-6 may represent a more structurally

coherent index of nightmare proneness rather than merely a shorter version of the original scale.

Despite promising initial findings, comprehensive psychometric evaluation of the NPS-6 remains limited. In particular, replication of its factor structure in independent adult samples, examination of convergent and discriminant validity relative to theoretically relevant and irrelevant constructs, assessment of incremental validity beyond neuroticism and related processes, and evaluation of temporal stability are needed.

Accordingly, three studies were conducted. Study 1 re-examined the factor structure and internal consistency of the NPS-6 in an adult sample using a revised response scale. Study 2 investigated convergent, discriminant, and incremental validity. Study 3 examined one-month temporal stability. Together, these studies aimed to determine whether the NPS-6 provides a psychometrically sound and theoretically coherent measure of nightmare proneness suitable for research contexts requiring efficient assessment.

Study 1

The previous factor analysis of the NPS-6 (Kelly 2025b) was carried out on a sample of university students. The purpose of Study 1 was replicate those findings and explore the factor structure of the NPS-6 among another sample of adults and using a more accessible 5-point response scale.

Method

Participants

Initially 219 participants provided informed consent. However, 22 (10%) did not pass the attention checks embedded throughout the questionnaire (e.g., “Respond strongly agree for this item”; Meade & Craig, 2012). After eliminating those cases, the final sample was 197 participants including 100 (50.8%) men, 97 (49.2%) women. The average age of the sample was 40.01 years ($SD=11.76$) ranging from 20–77. Most participants identified their race/ethnicity as White/Caucasian (65%), followed by Asian (24.9%), Black or African American (5.6%), Latinx (2.5%), and “other or prefer not to say” (2.0%). Educational background of most participants was reported as having a bachelor’s degree (45.2%), followed by having a graduate degree (32%), some college (13.2%), a high school diploma (9.1%), or no high school diploma (0.5%).

Measures

Nightmare Proneness. Participants completed the 6-item version of the Nightmare Proneness Scale (NPS-6; Kelly, 2025b). The NPS-6 includes items that Kelly and Mathe (2019) reported as having the highest loadings on a general dysregulation factor of the original NPS (Kelly, 2018). The original NPS utilized a 7-point response scale. In the current study, a 5-point response scale was implemented ranging from 0 (*Strongly disagree*) to 4 (*Strongly agree*). Higher total scores indicated more nightmare proneness. One-week retest reliability of the original scale was reported at .72 (Kelly, 2018).

Procedures

Participants were recruited from Amazon Mechanical Turk (MTurk), a crowdsourcing platform on which “workers” can complete various jobs and research projects. Participants

competed the NPS-6 as part of a larger unrelated study advertised as a “Short Survey on Dreams and Personality.” Participants provided informed consent and completed the questionnaire using a secure online platform. Participants were limited to Amazon “masters”, those who have successfully completed many projects, with a 95% or above approval rating across projects. Participants were offered \$0.50 for completing the questionnaire. The only exclusionary criterion was being at least 18 years of age. No time limit was imposed for questionnaire completion. No duplicate cases were identified.

Statistical Analyses

Analyses were conducted using SPSS 30 for Windows. Coefficient alpha was calculated as a measure of internal consistency reliability. Omega was also calculated for comparison. The NPS-6 factor structure was examined using principal axis factor analysis. A criterion for the factor analysis was set as being able to account for at least 50% of the systematic variance. Such factors can be considered unidimensional scales (Gorsuch, 1983). Hair et al. (2014) suggest that item factor loadings $\geq .50$ are considered practically significant and those above .70 denote a strong factor structure.

Results and Discussion

Coefficient alpha reliability of the NPS-6 was .894 and coefficient omega was .896, indicating good internal consistency. The average total NPS-6 score was 9.57 ($SD = 6.38$), $Mdn = 9.00$, with scores ranging from 0–22. Distributions were approximately normal (skewness = 0.09, $SE = 0.17$) with slight platykurtosis (kurtosis = -1.22 , $SE = 0.35$), suggesting adequate variability across the trait continuum.

Principal axis factoring extracted a single factor (eigenvalue = 3.52) accounting for 58.7% of the systematic variance. All items loaded $\geq .50$, and all but one loaded $\geq .70$ (see Table 1), meeting conventional criteria for practical and strong loadings (Hair et al., 2014). The extracted variance exceeded the 50% criterion commonly interpreted as consistent with unidimensional measurement (Gorsuch, 1983).

Table 1: NPS-6 items, and principal axis factor analysis loadings (Study 1)

Item	FL
1. I am uncertain why I do the things I do.	.80
2. Sometimes in the dark, I see shapes or forms but nothing is there.	.73
3. My mind has been so full of different ideas I couldn't focus on one thing.	.76
4. I have to constantly be on my guard, even around friends.	.68
5. Sometimes I think I hear someone talking, though no one is there.	.80
6. My moods change suddenly for no apparent reason.	.82

Note: $N = 197$. NPS-6=Nightmare Proneness Scale-6. FL = factor loading. Scale instructions: “Please indicate how much each of these statements applies to you. There are no right or wrong answers.”

These findings replicate prior results from a student sample (Kelly, 2025b). Given that the NPS-6 was derived from an exploratory reduction of the original NPS, replication of the factor structure using principal axis factoring in an independent adult sample provides evidence of unidimensional structural stability across sampling contexts. The magnitude and consistency

of loadings suggest that the abbreviated form captures a coherent latent construct rather than a loose aggregation of related symptoms.

Study 2

In Study 1 the NPS-6 was found to have a unidimensional factor structure and adequate internal consistency reliability. The purpose of Study 2 was to examine the convergent and discriminant validity of the NPS-6. Convergent validity measures of variables were chosen which hypothetically should be moderately to strongly associated with a measure of nightmare proneness: vulnerability, emotional dysregulation, a concretizing defensive style, and neuroticism (Kelly, 2018, 2025a; Kelly & Daughtry, 2022; Kelly & Yu, 2019). Indeed, vulnerability, dysregulation, and concretization are hypothesized processes of nightmare proneness suggesting they should be strongly correlated with the NPS-6. Perceived nightmare frequency was also included expecting a medium correlation coefficient (Kelly, 2024a). Discriminant validity variables were chosen which have no clear rationale for relationships with nightmare proneness and previously were found to have small, nonsignificant relationships with the full NPS (Kelly & Yu, 2019): habitual sleep length and social desirability.

Method

Participants

Of the 345 participants who provided informed consent and completed the survey, 83 (24.1%) did not pass all three attention checks embedded in the questionnaire (see Study 1). These cases were not included in the final dataset. Among the remaining 262 cases included in the final dataset were 137 (52.3%) women and 125 (47.7%) men. The average age of the sample was 35.71 years ($SD = 9.86$) ranging from 21–67. Most participants identified their race/ethnicity as White/Caucasian (90.1%), followed by Asian (3.8%), Black or African American (3.4%), Latinx (0.8%), Middle Eastern or North African (0.8%) and “other or prefer not to say” (1.1%). Educational backgrounds were identified mostly as having a bachelor’s degree (61.1%), followed by a graduate degree (28.2%), high school diploma (6.1%), or some college (4.6%).

Measures

Nightmare Proneness. The NPS-6 was administered as described in Study 1.

Nightmares. Perceived nightmare frequency was measured using the 3-item Nightmare Frequency Index-3 (Kelly, 2024c, 2026). Nightmares were defined for participants as “unpleasant and clearly remembered dreams that awaken you; after waking you quickly become alert.” Participants responded using a 0 (*Strongly disagree*) to 4 (*Strongly agree*) scale. Higher average scores indicated more nightmares. Adequate validity and one-month retest reliability coefficient of .80 was reported (Kelly, 2026).

Vulnerability. Vulnerability was assessed with the six-item Psychological Vulnerability Scale (Sinclair & Wallston, 1999). The scale measures cognitions which increase vulnerability to stressors. Participants responded 1 (*Strongly disagree*) to 5 (*Strongly agree*). Higher total scores indicated more vulnerability. The measure has adequate validity and three-month retest reliability coefficient was estimated at .81 (Sinclair & Wallston, 1999).

Emotional Dysregulation. Emotional dysregulation was assessed using the six-item Emotional Reactivity Scale of the Differentiation of Self Inventory- Short (Drake et al., 2015).

Participants responded 1 (*Not at all characteristic of me*) to 5 (*Very characteristic of me*). Items were scored such that higher total scores indicated more dysregulation. The measure has adequate validity and five-week retest reliability coefficient was estimated at .82 (Drake et al., 2015).

Concretization. Concretization was assessed using the six-item Concretization Scale (Kelly, Daughtry, et al., 2024). The scale authors conceptualize concretization as a defensive style through which individuals are more likely experience unclear inner states through more tangible concretizations. Participants responded 0 (*Strongly disagree*) to 4 (*Strongly agree*). Higher total scores represented more concretization. Adequate validity and coefficient alpha reliability coefficients ranging from .78–.86 have been reported (Kelly, Daughtry, et al., 2024).

Neuroticism. Neuroticism was measured using the six-item Negative Emotionality Scale of the Big Five Inventory-2-S (Soto & John, 2017). The scale assesses a pattern of emotional instability and being easily perturbed. Participants responded 1 (*Strongly disagree*) to 5 (*Strongly agree*). Higher total scores indicated more neuroticism. Adequate validity and coefficient alpha reliabilities ranging from .82–.84 have been reported (Soto & John, 2017).

Social Desirability. Social desirability was measured using the five-item Socially Desirable Response Set-5 (Hays et al., 1989). The scale assesses a tendency to give socially desirable responses. Participants responded 1 (*Definitely true*) to 5 (*Definitely false*). Using Hays et al.'s (1989) scoring approach, extreme responses (i.e., “1” or “5” as appropriate for each item) were scored as “1” and all other responses as “0”. As such, total scale scores ranged from 0–5. Higher total scores indicated more social desirability. Validity was acceptable and coefficient alpha reliability was reported to be .68 while one month retest reliability coefficient was .75 (Hays et al., 1989).

Sleep Length. Sleep length was measured using the three-item Length of Sleep Test (Kelly, 2009). The scale assesses habitual sleep duration across three self-estimated time spans: on average, past two weeks, and the past day. Participants responded by choosing hour estimates of sleep with responses: 1 (*5.9 or fewer*), 2 (*6– 6.9*), 3 (*7– 7.9*), 4 (*8– 8.9*), 5 (*9 or more*). Higher average total scores indicated more habitual sleep length. The measure has adequate validity and the coefficient alpha reliability coefficient was estimated at .87 (Kelly, 2009).

Procedures

Participants were recruited from MTurk. The study was advertised as “Personality and Sleep Experiences.” Participants provided informed consent and completed the questionnaire using a secure online platform. Unlike Study 1, in hopes of drawing a more general sample the “masters” designation was not required for participation. No payment or incentives were offered. Other than being at least 18 years of age, no other exclusionary criteria were used. No time limit was imposed for questionnaire completion. No duplicate cases were identified.

Statistical Analyses

SPSS 30 for Windows was used for statistical analyses. Descriptive statistics and coefficient alpha were calculated for measures. Coefficient alpha was considered adequate if it was $\geq .70$ (Nunnally, 1978). Pearson correlations were calculated to examine relationships between the NPS-6 and other variables to examine convergent (vulnerability, emotional dysregulation, concretization, and neuroticism), discriminant validity (sleep length and social desirability), and nightmare frequency. Convergent correlations were considered adequate if

they were $\geq .50$ (Abma et al., 2016). Discriminant validity was considered supported if correlations were small and nonsignificant (Drummond et al., 2019). Incremental validity was investigated using a hierarchical linear regression using nightmares as the criterion while entering sociodemographics, convergent, and discriminant variables on Step 2 and the NPS-6 on Step 2. Results were considered statistically significant if $p < .050$. Cohen's (1988) criteria were used to denote correlation sizes: .10, .30, and .50 are considered small, medium, and large, respectively.

Results and Discussion

Descriptive statistics and reliability coefficients are presented in Table 2. All measures demonstrated adequate internal consistency ($\alpha \geq .70$). Pearson correlations indicated that the NPS-6 was strongly associated with vulnerability, emotional dysregulation, concretization, and neuroticism. The largest correlations were observed with vulnerability, dysregulation, and concretization: processes theorized to constitute core processes of nightmare proneness (Kelly & Daughtry, 2022; Kelly & Yu, 2019). The correlation with perceived nightmare frequency was also large, though somewhat lower than correlations with core structural processes.

Table 2: Scale Properties and Correlations with the NPS-6 (Study 2)

Variable	<i>M</i>	<i>SD</i>	<i>α</i>	<i>r</i>	<i>p</i>
NPS-6	14.67	4.47	.814	--	--
Vulnerability	21.07	4.32	.792	.77	<.001
Emotional Dysregulation	21.87	3.98	.770	.77	<.001
Concretization	14.86	4.96	.855	.79	<.001
Neuroticism	21.21	4.17	.720	.62	<.001
Nightmares	2.60	0.91	.730	.60	<.001
Social Desirability	0.58	0.83	.659	-.04	.484
Sleep Length	2.80	0.85	.824	.11	.075

Note: $N = 262$. NPS-6 = Nightmare Proneness Scale-6.

The average convergent validity coefficient was .74, corresponding to approximately 55% shared variance and 45% nonshared variance. Although this magnitude indicates substantial overlap, considering the internal consistency of all measures, it also reflects that nearly half of the variance in nightmare proneness not explained by these related constructs. Thus, while strongly related, the NPS-6 might be considered strongly related but not isomorphic with vulnerability, dysregulation, concretization, or neuroticism.

Discriminant validity was supported by small, nonsignificant correlations between the NPS-6 and social desirability as well as habitual sleep length (average $r = .08$, <1% shared variance). The absence of association with socially desirable responding suggests NPS-6 scores are unlikely to reflect generalized response bias (Drummond et al., 2019). Similarly, the lack of relationship with sleep duration indicates that nightmare proneness is not reducible to sleep quantity.

To further examine construct differentiation, hierarchical regression analyses were conducted predicting nightmares (Table 3). Sociodemographics and convergent/discriminant variables accounted for 35.9% of the variance in nightmares on Step 1. On Step 2, the NPS-6 accounted for an additional 5.9% of variance, and its standardized beta was relatively large.

Incremental effects of this magnitude are typical in trait–outcome prediction within personality research. In the final model, only race/ethnicity (being White), vulnerability, and nightmare proneness remained significant predictors.

Table 3: Incremental validity regression predicting nightmares (Study 2)

Variable	Model 1		Model 2	
	β	p	β	p
Age	.06	.250	.07	.155
Gender (1 = men, 2 = women)	.11	.044	.09	.060
Race (0 = White, 1 = Nonwhite)	−.13	.013	−.12	.017
Education level	−.02	.706	−.02	.746
Vulnerability	.34	<.001	.23	.016
Emotional dysregulation	.01	.902	−.12	.219
Concretization	.23	.023	.10	.309
Neuroticism	.03	.675	−.05	.508
Social desirability	.02	.676	.05	.375
Sleep length	.02	.687	−.01	.912
Nightmare proneness			.47	<.001
		$\Delta R^2 = .359, F = 14.08,$ $p < .001$	$\Delta R^2 = .059, F = 25.59,$ $p < .001$	

The incremental contribution of the NPS-6 partly clarifies the variance overlap issue. If nightmare proneness merely reflected dysregulation, vulnerability, concretization, or neuroticism, its predictive value would be expected to diminish once these processes were included. Instead, despite substantial shared variance at the correlational level, nightmare proneness retained unique explanatory power in predicting nightmares. This pattern suggests that the NPS-6 may reflect an organizing disposition through which vulnerability, dysregulation, and concretization are expressed in nightmare production.

Overall, the findings support strong convergent validity consistent with the theoretical model (Kelly & Daughtry, 2022; Kelly & Mathe, 2019), negligible discriminant associations with unrelated variables, and meaningful incremental validity. Although overlapping with related cognitive–affective processes, the NPS-6 demonstrates substantial unique variance and functional distinctiveness in predicting nightmares.

Study 3

Studies 1 and 2 examined the factorial, convergent, discriminant, and incremental validity of the NPS-6. These studies also supported the measure's internal consistency reliability. Study 3 aimed to examine the temporal stability of the NPS-6. Stability is an important consideration given that nightmare proneness is hypothesized to be trait-like (Kelly, 2018).

Method

Participants

The current study included 81 participants who provided informed consent and completed measures at two timepoints about one month apart. All participants passed attention checks

embedded throughout the questionnaire at Time 1 and 2 as described in Study 1. Of the participants, 50 (61.7%) identified themselves as men and 31 (38.3%) as women. The average age of the sample was 44.27 years ($SD = 10.84$) ranging from 25–70. Most participants identified their race/ethnicity as Asian (43.2%), followed by White/Caucasian (40.7%), Black or African American (6.2%), Latinx (6.2%), and “other or prefer not to say” (3.7%). Educational backgrounds mostly were identified as having a bachelor’s degree (54.3%), a graduate degree (28.4%), some college (11.1%), or a high school diploma (6.2%).

Measures

Nightmare Proneness. The NPS-6 was administered as described in Studies 1 and 2.

Procedures

Participants were from a larger longitudinal study recruited from MTurk advertised as “Personality and Sleep Experiences.” Participants were limited to “masters”, those who had a 95% or above approval rating across projects. Participants completed questionnaires at Time 1 and approximately one month later at Time 2. Participants were offered \$0.50 for completing the questionnaires at each timepoint. Participants provided informed consent and completed the questionnaire online using a secure online platform. Other than being at least 18 years of age and “masters”, no other exclusionary criteria were used. No time limit was imposed for questionnaire completion.

Statistical Analyses

Coefficient alpha reliability was calculated for measures at Time 1 and Time 2. Pearson correlations were calculated to estimate retest reliabilities.

Results and Discussion

The average interval between assessments was 32.01 days (range = 24–36). Internal consistency remained high at both Time 1 ($\alpha = .906$) and Time 2 ($\alpha = .898$). The one-month retest reliability was .902, indicating that 81.3% of variance was shared across timepoints.

This degree of temporal stability is consistent with a trait-like construct and exceeds the previously reported one-week stability of the full NPS (.72; Kelly, 2018). The higher stability of the NPS-6 may reflect concentration on the most central trait-like nightmare proneness indicators and reduction of items potentially influenced by transient affective states. Thus, abbreviation may have sharpened measurement of the enduring component of nightmare proneness.

General Discussion

The present series of studies provides evidence that nightmare proneness can be measured efficiently using a six-item scale without substantial loss of reliability, structural coherence, or predictive validity. Across three independent adult samples, the NPS-6 demonstrated a stable unidimensional structure, strong internal consistency, convergent and discriminant validity, incremental prediction of nightmares, and high one-month retest reliability.

A central issue raised by the findings concerns the magnitude of overlap between nightmare proneness and related cognitive-affective processes. The NPS-6 correlated strongly with vulnerability, emotional dysregulation, concretization. On one hand, this is consistent

with prior research linking nightmares with trait affective distress (Gieselmann et al., 2019). Indeed, these associations are theoretically coherent given that vulnerability, dysregulation, and concretization are proposed components of the nightmare proneness model (Kelly & Daughtry, 2022; Kelly & Yu, 2019). On the other hand, the strength of these correlations raises the question of whether nightmare proneness represents a distinct construct or a reconfiguration of broader maladjustment-related traits, particularly given item-level overlap with a general maladjustment measure developed using different methodology (Kelly, 2020).

The findings are consistent with conceptualizing nightmare proneness as a higher-order, domain-specific disposition that integrates vulnerability, emotional dysregulation, and concretization processes in a manner that channels affective arousal into dysphoric dream imagery. Although strongly overlapping with what could represent general distress-related traits, nightmare proneness appears to reflect the patterned organization of these processes within a sleep-related context rather than simply indexing global maladjustment. Consistent with this interpretation, despite substantial shared variance at the correlational level, the NPS-6 retained unique predictive value in accounting for nightmare frequency after controlling all other variables in this study, suggesting that it may capture an organizing disposition through which these processes are expressed in nightmare production.

The strong association between nightmare proneness and concretization supports previously proposed mechanisms. One interpretation is that concretization reflects a process through which vague internal states become symbolically instantiated in dream imagery (Kelly, 2024c). Another possibility that remains unexamined involves activation of distressing visual imagery followed by attempts to regulate or de-cathect that imagery (Kelly, 2023b; Levin & Nielsen, 2007). These mechanisms are not mutually exclusive and warrant direct empirical testing.

The approximately normal distribution of NPS-6 scores suggests that nightmare proneness reflects dimensional variation across individuals rather than a construct restricted to extreme psychopathology. Moderate levels may represent normative differences in affective reactivity and imagery processing, whereas extreme levels may confer increased risk for frequent nightmares. This dimensional pattern aligns with perspectives that view nightmares along a continuum from adaptive emotional processing to maladaptive repetition (Nielsen & Carr, 2017).

The abbreviated scale may, in some respects, provide a clearer index of the trait core than the original NPS. The higher one-month retest reliability of the NPS-6 relative to the previously reported one-week stability of the full scale (.72; Kelly, 2018) suggests that concentrating on the strongest factor indicators may reduce the influence of transient state-related items such as acute stress or depressive reactions. Thus, abbreviation may reflect refinement of the core dispositional variance.

Several limitations warrant consideration. All studies relied on MTurk samples. Although MTurk provides broader demographic variability than typical student samples, such samples are self-selected and may demonstrate elevated rates of psychopathology relative to nationally representative samples (Walters et al., 2018). This in itself may partly have influenced the high convergent correlations and indicates a need for replication in other samples. Additionally, MTurk samples may be vulnerable to careless responding (Meade & Craig, 2012). Although attention checks were implemented and reliability estimates were strong, response biases cannot be entirely ruled out.

The studies also relied exclusively on retrospective self-report measures. Retrospective reports of nightmares may differ from prospective diary-based assessments (Robert & Zadra, 2008), and self-report measures may be influenced by general negative affectivity or self-perception biases (Watson & Pennebaker, 1989). However, prior research indicates that nightmare proneness predicts nightmares and insomnia symptoms beyond indices of negative responding (Kelly, 2022), partially mitigating this concern.

Future research should examine the relationship between the NPS-6 and prospective diary measures of nightmares to clarify predictive validity in real-time assessments. Replication in clinical and community-representative samples would strengthen generalizability. Longitudinal designs are needed to determine whether nightmare proneness prospectively predicts changes in nightmare frequency. It would also be informative to examine whether reductions in nightmares following interventions such as imagery rehearsal therapy (Krakow & Zadra, 2010) are accompanied by changes in nightmare proneness, thereby clarifying directionality. Finally, structural modeling approaches may clarify whether nightmare proneness functions as a higher-order latent construct organizing vulnerability, dysregulation, and concretization processes or whether its predictive utility derives from specific components.

In conclusion, the NPS-6 appears to provide a psychometrically sound, temporally stable, and theoretically coherent measure of nightmare proneness. While further replication is warranted, the present findings support its use in research contexts requiring efficient assessment of individual differences in susceptibility to nightmares.

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